TIMKEN

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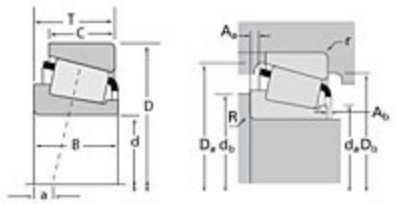
Timken Part Number 28580 - 28521, Tapered Roller Bearings - TS (Tapered Single) Imperial

This is the most basic and most widely used type of tapered roller bearing. It consists of two main separable parts: the cone (inner ring) assembly and the cup (outer ring). It is typically mounted in opposing pairs on a shaft.



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Specifications

Series	28500
Cone Part Number	28580
Cup Part Number	28521
Design Units	Imperial
Bearing Weight	0.700 Kg 1.60 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	50.8 mm 2 in
D - Cup Outer Diameter	92.075 mm 3.6250 in

B - Cone Width	25.400 mm 1.0000 in
C - Cup Width	19.845 mm 0.7813 in
T - Bearing Width	24.608 mm 0.9688 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	3.560 mm 0.14 in
r - Cup Backface "To Clear" Radius[2]	0.76 mm 0.030 in
da - Cone Frontface Backing Diameter	56.90 mm 2.24 in
db - Cone Backface Backing Diameter	62.99 mm 2.48 in
Da - Cup Frontface Backing Diameter	87.88 mm 3.46 in
Db - Cup Backface Backing Diameter	83.06 mm 3.27 in
Ab - Cage-Cone Frontface Clearance	1.5 mm 0.06 in
Aa - Cage-Cone Backface Clearance	1 mm 0.04 in
a - Effective Center Location[3]	-4.80 mm -0.19 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	25700 N 5770 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	98900 N 22200 lbf
C0 - Static Radial Rating	130000 N 29200 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	16600 N 3720 lbf

Factors

K - Factor[7]	1.55
e - ISO Factor[8]	0.38
Y - ISO Factor[9]	1.59
G1 - Heat Generation Factor (Roller-Raceway)	46.4
G2 - Heat Generation Factor (Rib-Roller End)	22.6
Cg - Geometry Factor	0.0912

[1] These maximum fillet radii will be cleared by the bearing corners.
[2] These maximum fillet radii will be cleared by the bearing corners.
[3] Negative value indicates effective center inside cone backface.
[4] Based on 90 x 10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.
[5] Based on 1 x 10^6 revolutions L_{10} life, for the ISO life calculation method.
[6] Based on 90 x 10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.
[7] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.
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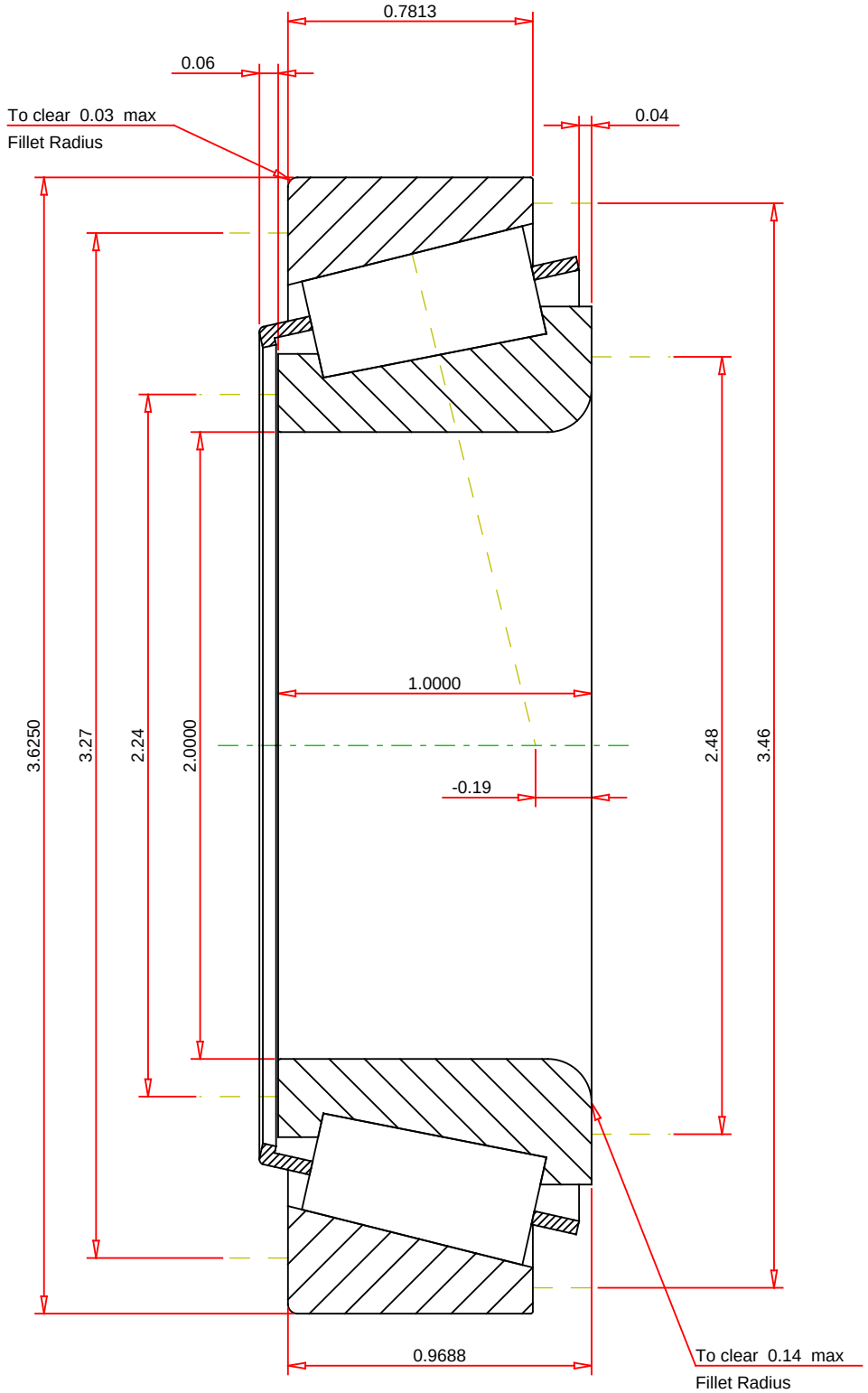

IMPERIAL UNITS

ISO Factor - e	0.38	
ISO Factor - Y	1.59	
Bearing Weight	1.6	lb
Number of Rollers Per Row	21	
Effective Center Location	-0.19	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

28580 - 28521
TS BEARING ASSEMBLY

K Factor	1.55	
Dynamic Radial Rating - C90	25700	lbf
Dynamic Thrust Rating - Ca90	16600	lbf
Static Radial Rating - C0	130000	lbf
Dynamic Radial Rating - C1	98900	lbf

FOR DISCUSSION ONLY